

Supplementary Table 1. Comparison of kidney, urinary and metabolic biomarkers, work practices, hydration practices and lifestyle characteristics of subjects with reduced kidney function ( $<80\text{ml/min}/1.73\text{ m}^2$ ) and subjects with normal kidney function ( $\geq80\text{ml/min}/1.73\text{ m}^2$ ), all study participants (N=194) and sugarcane workers (N=86)

	All workers (N=194)			P-value*	Sugarcane cutters (N=86)		
	eGFR $<80\text{ml/min}/1.73\text{ m}^2$ N=20	eGFR $\geq80\text{ml/min}/1.73\text{ m}^2$ N=174			eGFR $<80\text{ml/min}/1.73\text{ m}^2$ N=14	eGFR $\geq80\text{ml/min}/1.73\text{ m}^2$ N=72	P-value*
<b>Kidney function</b>							
eGFR (ml/min/1.73 m <sup>2</sup> ), median (10%; 90%)	55 (27; 76)	129 (112; 147)	<0.001	63 (39, 78)	134 (102, 153)	<0.001	
S creatinine (mg/dL), median (10%; 90%)	1.67 (0.24; 3.05)	0.72 (0.56; 0.94)	<0.001	1.47 (1.24; 2.21)	0.70 (0.51; 0.95)	<0.001	
S urea nitrogen (BUN) (mg/dL), median (10%; 90%)	22.6 (13.5; 28.3)	10.0 (6.1; 15.0)	<0.001	22.6 (14.4; 28.1)	12.1 (7.9; 18.0)	<0.001	
S uric acid (mg/dL), median (10%; 90%)	8.2 (6.7; 11.0)	5.2 (3.9; 6.8)	<0.001	8.1 (6.9, 11.8)	5.4 (3.9, 6.9)	<0.001	
S uric acid >7.2 mg/dL, % (# cases)	85.0 (17)	5.7 (10)	<0.001	85.7 (12)	4.2 (3)	<0.001	
Protein >30 mg, % (# cases) (N=180)	20.0 (4)	7.5 (13)	0.09	23.1 (3)	2.9 (8)	0.39	
Leukocytes positive at dipstick, % (# cases)	30.0 (6)	8.0 (14)	0.009	42.9 (6)	18.1 (13)	0.07	
Blood, traces and higher at dipstick, % (# cases)	20.0 (4)	1.7 (3)	0.002	28.6 (4)	1.4 (1)	0.002	
<b>Hydration</b>							
USG $\geq$ 1030, % (# cases) (N=190)	10.0 (2)	21.8 (37)	0.38	7.1 (1)	16.9 (12)	0.69	
USG $\leq$ 1005, % (# cases) (N=190)	20.0 (4)	16.1 (28)	0.75	28.6 (4)	12.7 (9)	0.22	
pH $\leq$ 5.5, % (# cases) (N=190)	30.0 (6)	18.4 (32)	0.24	42.9 (6)	26.8 (19)	0.34	
BUN/serum creatinine ratio $>$ 20	0 (0)	13.8 (24)	0.14	0 (0)	30.6 (22)	0.02	
<b>Work practices</b>							
Sugarcane cutter ever, % (# cases)	75.0 (15)	43.1 (75)	0.007	n.a. <sup>a</sup>	n.a.	n.a.	
Cumulative time in job (months), median (10%; 90%)	90 (2; 235)	62.5 (4; 180)	0.39	108 (30; 216)	60 (30; 216)	0.06	
Work day (hours), median (10%; 90%)	7.75 (6.0; 10.0)	8.0 (4.0; 10.0)	0.85	7.0 (5.5; 10.0)	8.0 (6.0; 9.0)	0.03	
Hours cutting cane, median (10%; 90%)	n.a. <sup>a</sup>	n.a.	n.a.	6.0 (4.6; 7.5)	6.8 (5.0; 8.0)	0.02	
Total break time (min), median (10%; 90%)	60 (20; 113)	60 (20; 104)	0.55	60.0 (20, 112)	60 (25, 90)	0.30	
Breaks $\leq$ 2/d, % (# cases)	65.0 (13)	70.7 (123)	0.60	57.1 (8)	63.9 (46)	0.63	

	All workers (N=194)			Sugarcane cutters (N=86)		
	eGFR <80ml/min/1.73 m <sup>2</sup> N=20	eGFR ≥80ml/min/1.73 m <sup>2</sup> N=174	P-value*	eGFR <80ml/min/1.73 m <sup>2</sup> N=14	eGFR ≥80ml/min/1.73 m <sup>2</sup> N=72	P-value*
No shade during breaks, % (# cases)	20.0 (4)	12.1 (21)	0.30	28.6 (4)	19.4 (14)	0.48
High speed perception, % (# cases)	75.0 (15)	57.5 (100)	0.13	85.7 (12)	72.2 (52)	0.50
Production (tons/d), median (10%; 90%)	n.a.	n.a.	n.a.	6.5 (5.0; 10.0)	7.0 (5.0; 10.0)	0.66
Incentives to cut more, % (N)	n.a.	n.a.	n.a.	71.4 (10)	84.7 (61)	0.26
History of pesticide use, % (# cases)	30.0 (6)	44.3 (77)	0.22	42.9 (6)	47.2 (34)	1.00
Chlorpyrifos, % (# cases)	0 (0)	6.9 (12)	0.62	0 (0)	0 (0)	-
Cypermethrin, % (# cases)	10.0 (2)	23.0 (40)	0.26	14.3 (2)	19.4 (14)	1.00
Paraquat, % (# cases)	0 (0)	13.2 (23)	0.14	0 (0)	11.1 (8)	0.34
2,4-D, % (# cases)	20.0 (4)	12.1 (21)	0.30	28.6 (4)	22.2 (16)	0.73
Glyphosate, % (# cases)	15.0 (3)	9.2 (16)	0.42	21.3 (3)	19.4 (14)	1.00
<b>Hydration practices</b>						
Total fluid intake (L), median (10%; 90%)	5.0 (1.1; 13.8)	3.8 (1.9; 10.0)	0.08	6.7 (1.4; 14.6)	4.5 (2.2; 12.4)	0.16
Low total fluid intake ≤2.5 L/d, % (# cases)	15.0 (3)	25.9 (45)	0.41	14.2 (2)	19.4 (14)	1.00
High total fluid intake ≥7.0 L/d, % (# cases)	40.0 (7)	22.4 (39)	0.10	50.0 (7)	38.9 (28)	0.44
Water (L), median (10%; 90%)	4.5 (0.3; 13.3)	2.2 (0.5; 8.0)	0.03	6.3 (0.6; 14.3)	2.2 (0.7; 10.0)	0.03
Low water intake < 1.5 L/d, % (# cases)	20.0 (4)	25.3 (44)	0.79	14.2 (2)	19.4 (14)	1.00
High water intake > 4.5 L/d, % (# cases)	50.0 (10)	22.4 (39)	0.007	64.3 (9)	30.6 (22)	0.02
Sugary beverage, median (10%; 90%)	0.6 (0.4; 2.4)	1.25 (0.5; 3.0)	0.001	0.5 (0.3; 1.9)	1.6 (0.4; 4.5)	0.002
Low sugary drink intake <0.75 L/d, % (# cases)	50.0 (10)	22.4 (39)	0.007	64.3 (9)	26.4 (19)	0.01
High sugary drink intake ≥2.0 L/d, % (# cases)	10.0 (2)	28.7 (50)	0.07	7.1 (1)	40.3 (29)	0.03
Intake electrolyte solution, % (N)	n.a.	n.a.	n.a.	7.1 (1)	41.7 (30)	0.01
<b>Age, metabolic and lifestyle risk factors</b>						
Age (yrs), median (10%; 90%)	29.5 (21; 37)	25 (19; 33)	0.002	29 (20; 36.5)	24 (18; 33)	0.01
Hypertension (history or exam), % (# cases)	15.0 (3)	19.5 (34)	0.77	21.4 (3)	4.2 (3)	0.05
Body mass index (BMI, kg/m <sup>2</sup> ), median (10%; 90%)	24.0 (19.9; 28.9)	23.3 (19.9; 29.7)	0.49	23.0 (19.2; 29.7)	22.2 (19.6; 26.4)	0.23

	All workers (N=194)			Sugarcane cutters (N=86)		
	eGFR <80ml/min/1.73 m <sup>2</sup> N=20	eGFR ≥80ml/min/1.73 m <sup>2</sup> N=174	P-value*	eGFR <80ml/min/1.73 m <sup>2</sup> N=14	eGFR ≥80ml/min/1.73 m <sup>2</sup> N=72	P-value*
	BMI >25 kg/m <sup>2</sup> , % (# cases)	40.0 (8)	35.1 (61)	0.81	21.4 (3)	16.7 (12)
BMI >30 kg/m <sup>2</sup> , % (# cases)	5.0 (1)	15 (8.6)	1.00	7.1 (1)	1.4 (1)	0.30
Heart rate >80 pulses/min, % (# cases)	25.0 (5)	15.5 (27)	0.34	28.6 (4)	5.6 (4)	0.02
Glycemia (mg/dL), median (10%; 90%)	90.4 (78.0; 103.1)	87.9 (75.3; 104.2)	0.64	90.8 (79.3; 103.5)	88.4 (75.2; 103.6)	0.43
Glycemia ≥ 100 mg/dL, % (# cases)	15.0 (3)	16.1 (28)	1.00	14.3 (2)	15.3 (11)	1.00
Hypertension (HT) and hyperglycemia (≥100mg/dL), % (# cases)	0 (0)	2.9 (5)	1.00	0 (0)	0 (0)	-
Triglycerides (mg/dL), median (10%; 90%)	144.7 (76.4; 293.2)	122.7 (59.2; 268.1)	0.15	139.1 (74.4; 304.9)	101.7 (48.3; 188.1)	0.01
LDL cholesterol (mg/dL), median (10%; 90%)	89.9 (53.5; 138.7)	93.7 (58.7; 135.1)	0.78	96.4 (63.4; 134.0)	91.0 (57.1; 131.8)	0.44
HDL cholesterol (mg/dL), median (10%; 90%)	39.9 (20.7; 56.1)	43.0 (32.2; 60.1)	0.23	42.2 (23.1; 58.4)	47.7 (33.9; 67.8)	0.06
VLDL cholesterol (mg/dL), median (10%; 90%)	28.9 (15.3; 58.6)	24.8 (11.9; 53.6)	0.15	27.8 (14.9; 61.0)	20.3 (9.7; 37.6)	0.01
Hemoglobin (mg/dL), median (10%; 90%) <sup>b</sup>	11.2 (10.5; 14.9)	14.8 (12.5; 16.43)	0.001	11.1 (10.2; 13.1)	13.8 (11.9; 15.8)	<0.001
Hb < 13 mg/dL, % (# cases) <sup>b</sup>	75.0 (15)	12.4 (21)	<0.001	85.7 (12/14)	25.4 (17/67)	<0.001
White blood cell count (#/ $\mu$ L), median (10%; 90%) <sup>b</sup>	7600 (6200; 11.790)	7300 (5000; 9500)	0.68	7500 (5750; 12.250)	7200 (4400; 9480)	0.95
High tobacco consumption, % (# cases)	45.0 (9)	20.0 (35)	0.02	41.7 (5)	11.3 (8)	0.02
High alcohol consumption, % (# cases)	10.0 (2)	27.0 (47)	0.10	7.1 (1)	20.8 (15)	0.21
Regular use of nephrotoxic medications, % (# cases)	10.0 (2)	6.3 (11)	0.63	7.1 (1)	5.6 (4)	1.00

\*Mann Whitney U test for medians; Chi-square test (Fisher exact test when 1 or more cells with count<5) for categorical data

<sup>a</sup> n.a.: not applicable

<sup>b</sup> 5 missing values for sugarcane cutters due to technical error